ers and specialists, hospital admissions within the last 12 months, and number of medications taken at least once a week. The results were presented according to age (in 5-year intervals), gender, education and subjective perception of income. Analyses of bivariate relationship dependency were performed by Pearson's chi-square test and Cramer's contingency coefficient, wherein the value of $p < 0.05$ marked the significance level. **RESULTS:** The analysis showed as intuitively expected that older individuals in Slovenia more often seek ambulatory medical care, take multiple medications and are hospitalized at a higher rate. The only exception was the oldest seniors (85+) group, in which we observed that the utilization of health services was lower than in the age group from 70 to 79 years. Besides age, education was an important factor that influenced the use of health care services, while income significantly affected only the number of contacts with general practitioners. **CONCLUSIONS:** Our findings are important as the basis for the planning and implementation of health care system in Slovenia, particularly in the current conditions of austerity measures, changing demographic structure and rapid technological progress of medicine.

PHP5

DEVELOPMENT, TEST-RETEST RELIABILITY AND VALIDITY OF THE PHARMACY VALUE ADDED SERVICES QUESTIONNAIRE

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OBJECTIVES: To establish reliability and validity of a Value Added Services Questionnaire (VASQ) using themes generated from interviews based on Theory of Planned Behaviour. **METHODS:** Using an extended Theory of Planned Behavior (TPB) as the theoretical model, face-to-face interviews generated salient beliefs of VAS. The VASQ questionnaire was constructed initially in English incorporating important themes and later translated into the Malay language with forward and backward translation. Intention (INT) to adopt VAS is predicted by Attitudes (ATT), Subjective Norms (SN), Perceived Behavioral Control (PBC), Knowledge and Expectations. Using a 7-point Likert-type scale and a dichotomous scale, test-retest reliability (N = 25) was assessed by administrating the questionnaire instrument twice at an interval of one week apart. Internal consistency was measured by Cronbach's alpha and construct stability between two administrations was assessed using the kappa statistic and the Intraclass correlation coefficient (ICC). Confirmatory factor analysis (N = 410) was conducted to assess construct validity of the VASQ. **RESULTS:** The kappa coefficients indicate a moderate to almost perfect strength of agreement between test and retest. The ICC for all scales tested for intra-rater (test-retest) reliability was good . The overall Cronbach' s alpha (N = 25) is 0.912 and 0.908 for the two time points. The result of factor analysis (N = 410) showed most items loaded strongly and correctly into corresponding factors. Only one item is suggested to be eliminated. **CONCLUSIONS:** This study is the first to develop and establish the reliability and validity of the Value Added Services Questionnaire instrument using the Theory of Planned Behaviour as the theoretical model. The translated Malay language version of VASQ is reliable and valid to predict Malaysian patients' intention to adopt VAS to collect partial medicine supply.

PHP6

THE IMPACT OF CONSUMER-DIRECTED HEALTH PLANS ON PRICE SHOPPING

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OBJECTIVES: To evaluate whether consumer-directed health plans (CDHPs) lead patients to shop for lower-cost office visits. **METHODS:** We started by comparing the prices paid by patients in CDHPs versus traditional plans. However, this simple approach had two potential bias sources: 1) differences in negotiated prices between CDHPs and traditional plans and 2) difference in patients' preferences for price shopping. Therefore, we first examined the negotiated price difference within the same provider and then investigated the Pre- (and post-) CDHP enrollment patients' price shopping behavior within the same plan and hospital referral region (Plan-HRR). Finally, we estimated the effect of CDHP enrollment under difference-in-difference (DID) frameworks. We used longitudinal claims data comparing patients switching from traditional plans in pre year to CDHPs in post year (treatment group) with patients remaining in traditional plans (control group). The outcomes were the total price on the patient level and the percentile of the price within a Plan-HRR. **RESULTS:** CDHP patients paid higher price than controls, but even the same provider charged significantly higher price from CDHP patients (β=1.959±0.112, P<0.01). Prior to CDHP enrollment, patients in the treatment group paid slightly lower than the controls but not statistically significant (β=-0.528±0.328, P=0.108). Post-enrollment adjusted price was significantly lower in the treatment group (β=-2.224±0.392, P<0.01), which resulted in a slight but significant reduction in price paid by patients switching to CDHPs (price DID estimate: -1.697±0.504, P=0.001; percentile of price DID estimate: -0.900±0.480, P=0.061). Moreover, switching to CDHPs and simultaneously switching providers are associated with larger effects in price shopping relative to CDHP patients not switching providers, but the magnitude of the difference was small (price DID estimate: -2.188±0.605 vs. -0.491±0.462, P=0.0045; percentile of price DID estimate: -1.631±0.592 vs. -0.130±0.452, P=0.0151). **CONCLUSIONS:** Switching to CDHPs does lead patients shop for lower-cost office visits but the savings are modest.

HEALTH CARE USE & POLICY STUDIES – Diagnosis Related Group

PHP7

A NEW METHODOLOGY TO DEFINE THE SCOPE OF THE FRENCH « LISTE-EN-SUS »

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OBJECTIVES: The French "liste-en-sus" was implemented to support an equal access to innovative and higly-priced medicines. The methodology to define the scope of this list has been updated recently. Listing or delisting is now decided per therapeutic indication and no longer by product. Our aim is to assess the relevance of listed therapeutic indications in accordance with the updated methodology. **METHODS:** Using the health technology assessment published by the Transparency Committee, we gathered for each medicine included on the liste-en-sus (excluding blood-derived products) until march 1st, 2015 : assessment date, marketing authorization date, medical benefit and improvement in medical benefit (IMB) scores and medicine comparator. We selected therapeutic indications wich fulfilled both criteria : no IMB and the comparator is financed by diagnosis-related groups (DRGs). Using the French medicalized information system program, we identified International classification of diseases (ICD-10) codings groups and we collected expenditures corresponding to these indications in France in 2013. **RESULTS:** The liste-en-sus includes 214 indications. IMB is available in 87% of cases. 6% of indications have been evaluated before 2005. Another 7% are extensions of indication and they have not been assessed yet as marketing authorization has been granted recently. Among the 32% of indications showing no IMB, the comparator is financed by DRGs in 7% of cases (16 indications or 11 medicines). The 12 ICD-10 codings groups corresponding to these 16 indications show an expenditure of EUR 450.5 million. This amount represents 16% of the total expenditures (EUR 2.8 billion) for all medicines included on the liste-en-sus in 2013. **CONCLUSIONS:** From now on, all indications including extensions of indication have to be evaluated before being registered on the liste-en-sus by analyzing the health technology assessment published. 16 therapeutic indications are not matching the criteria defined in the new methodology.

HEALTH CARE USE & POLICY STUDIES – Disease Management

PHP8

PECULIARITY, ENVIRONMENTAL AND CHRONIC DISEASES: USING ECOLOGICAL MODELS AS A FRAMEWORK FOR ANALYSISING RISK FACTORS OF CHRONIC DISEASES

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OBJECTIVES: With the accelerated aging trend of the population and transformation of lifestyle, fundamental changes have taken place in disease spectrum of our human beings, anda major threat to human health has been gradually shifting from infectious diseases to chronic non-communicable diseases. Basing on above, an ecological model that derived from Bronfenbrenner's ecology of human development theory was proposed as a theory-based framework to analysis the risk factors of chronic diseases. Combined with the characteristics of chronic diseases, as well as sociology, policy science and related theory, the ecological model was elaborated to personal traits, behavior characteristics, family microsystem, work microsystem and the policy environment variables. **METHODS:** Cross-section data of CHARLS (China Health and Retirement Longitudinal Study) 2013 which includes about 10,000 households and 17,500 individuals in 150 counties/districts and 450 villages/resident committees was adopted to conduct the empirical study. Two Methods of regression analysis evolved from two-part models and descriptive statistically analysis were combined to analysis the effects of different influence factors on the prevalence and sicken age. **RESULTS:** Firstly, personal traits and behavioral characteristics are the primary factors which influence the prevalence of chronic diseases; Secondly, family microsystem, work microsystem can also have important effects on chronic disease prevalence and sicken age; thirdly, financial situation have non-continuous influence on chronic disease prevalence, which means only low standard of living will affect the incidence of chronic diseases. **CONCLUSIONS:** Some effective measures should be put forward to improve the chronic disease prevention and control work. Firstly, relevant departments should be undertaken by changing health development mode and carrying out prevention policy; Secondly, comprehensive intervention should be carried out in the community; Thirdly, basic medical insurances for low-income people to affordable health services should be guaranteed.

PHP9

INVESTIGATING LEVELS OF BACTERIAL RESISTANCE AND ANTIBIOTIC CONSUMPTION IN THE ST. PETERSBURG STATE MEDICAL UNIVERSITY

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OBJECTIVES: To investigate the trends in antibiotic resistance and antibiotic prescription between 2007 and 2014 in the St. Petersburg State Medical University. **METHODS:** Data on patient demographics, length of stay in hospital, clinical outcomes, antibiotic usage and antibiotic susceptibility were retrospectively gathered for 3000 patients across 7 hospital wards between the years 2008 and 2014. Patients were eligible if they presented with or had any bacterial infection in hospital and had a microbiological sample taken whilst in hospital. Across the same period, inpatient antibiotic prescriptions in the hospital pharmacy were gathered on a monthly basis and converted into their defined daily dose (DDD) per 100 bed-days. **RESULTS:** The most common infections were intra-abdominal (43%) and urinary tract (42%). Just over 3,800 microbiological samples were collected over the study period for culture and susceptibility. Fourteen percent of these showed the isolated microorganism being resistant to the antibiotic it was tested against. This was highest in 2014 where the level of overall resistance reached 17%. The prevalence of extended spectrum beta-lactamases (ESBLs) increased from 3% in 2008 to 11% in 2014. The data show that levels of Escherichia coli bacterial resistance doubled over the 7-year period from 11% to 22% with its resistance to ceftriaxone increasing from 2% in 2008 to 22% in 2014. Across the same time period the prescription of antibiotics, as measured by DDD, increased by 9.8%, with prescriptions of carbapenems increasing by 64%. **CONCLUSIONS:**